



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,553	12/18/2001	Audrey A. Sherman	56009 US002	2489

32692 7590 12/20/2004

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,553

Applicant(s)

SHERMAN ET AL.

Examiner

Christopher M. Keehan

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-21,23-36 and 38-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3-8,10-21,23-36,38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/4/04 has been entered.

Response to Arguments

Applicant's arguments filed 12/4/04 have been fully considered but they are not persuasive. Applicant has argued that Sherman et al. do not teach or disclose a copolymer because it is endcapped. However, Sherman et al. (page 10 of the specification) clearly show a structure that is called a polydiorganosiloxane oligourea segmented copolymer that can comprise units of siloxane ($p=10$ or larger) and units of urea ($m=0$ to 8). Sherman et al. also disclose further definitions of the X component wherein K can be a free radical polymerizable end group (page 12, sections b and c), which appear to still be polymerizable. However, even if the K component of the X moiety is not used, the structure of Sherman et al. appears to still be a copolymer.

Claim Rejections - 35 USC § 102/103

Claims 1, 3, 7, 10, 13-20, 22, 23, 27, 29-36, and 38-45 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sherman et al. (WO 96/34028). Sherman et al. disclose a pressure sensitive adhesive (PSA) comprising a silicone tackifying resin (page 18, line 25-page 20, line 13), a polydiorganosiloxane polyurea copolymer (page 10, line 9-col.13, line 7), and a plasticizer that can be blended into the composition (page 9, lines 21-23). Because the plasticizer is blended into the composition, it appears that the silicone tackifying resin and polydiorganosiloxane polyurea copolymer are inherently generally uniformly distributed. If not inherent, then It would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Sherman et al. to have achieved a generally uniform distribution as instantly claimed because upon blending, a generally uniform distribution would occur. Sherman et al. also disclose wherein the mole ratio of isocyanate to amine is in a range of about 0.9:1 to about 1.1:1 (Example beginning at the bottom of page 40). Sherman discloses 10 mmol diamine (20 mmol amines), 6.67 mmol diisocyanate (13.3 mmol isocyanate, and 6.67 mmol monoisocyanate (6.67 mmol isocyanate). These add up to a ratio of isocyanates to amine of about 1 .

Regarding claim 3, Sherman et al. disclose the instantly claimed amount (col.14, lines 1-12).

Regarding claim 7, Sherman et al. disclose a processing aid selected from the group as instantly claimed (page 9, lines 21-23).

Art Unit: 1712

Regarding claim 10, Sherman et al. disclose a reaction product of a polydiorganosiloxane with a polyisocyanate (page 14, line 5-page 16, line 25).

Regarding claims 13 and 15-17, Sherman et al. disclose the instantly claimed repeating unit (page 10, line 9-page 13, line 3).

Regarding claim 14, Regarding claim 11, Sherman et al. disclose the instantly claimed limitation (page 11, lines 6-10).

Regarding claim 18, the same reasoning as set forth above for claim 1 above (103 with Sherman et al.) also applies to claim 18, as the claimed subject matter is essentially the same.

Regarding claim 19, the same reasoning as set forth above for claims 1 and 9 (103 with Sherman et al.) also applies to claim 19, as the claimed subject matter is essentially the same.

Regarding claim 20, Sherman et al. disclose adding a plasticizer, considered by applicant to be a permanent processing aid (page 9, lines 21-23).

Regarding claims 22 and 23, Sherman et al. disclose the instantly claimed amounts (page 20, lines 14-21).

Regarding claim 27, Sherman et al. disclose a processing aid selected from the group as instantly claimed (page 9, lines 21-23).

Regarding claim 29, Sherman et al. disclose the instantly claimed polydiorganosiloxane polyurea copolymer repeating unit (page 10, line 9-page 13, line 7).

Art Unit: 1712

Regarding claims 30-35, Sherman et al. disclose the PSA of claim 1 and the instantly claimed limitations (page 30, line 26-page 31, line 30).

Regarding claim 36, the same reasoning as set forth above for claim 1 also applies to claim 36, as the claimed subject matter is essentially the same.

Regarding claims 38-40, the same reasoning as set forth above for claims 20 and 21 (103 with Sherman et al.) also applies to claims 38-40, as the claimed subject matter is essentially the same.

Regarding claim 41, Sherman et al. disclose a processing aid selected from the group as instantly claimed (page 9, lines 21-23).

Regarding claims 42-45, Sherman et al. appear to inherently disclose an increase in tack as claimed because Sherman et al. disclose adding a plasticizer to the same composition as applicant, and applicant has shown some increase in tack from adding the plasticizer (in the examples).

Claim Rejections - 35 USC § 103

Claims 8, 11, 12, 21, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman et al. (WO 96/34028). Regarding claims 8 and 28, although Sherman et al. do not appear to specifically disclose adding at least 0.5% by weight of processing aid, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the processing aid of Sherman et al. in an amount included in the range as instantly claimed because Applicant is claiming

Art Unit: 1712

such a broad range, virtually 0% to 100% by weight, and adding any kind of processing aid would appear to be included in the instantly claimed range.

Regarding claim 11, Sherman et al. do not appear to specifically disclose a chain extender. However, it is the Examiner's position that chain extenders are commonly used in the art to control the molecular weight of a polymer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a chain extender to control the molecular weight of the polymer.

Regarding claim 12, Sherman et al. disclose polydiorganosiloxane diamine (page 14, lines 4-7).

Regarding claim 21, Sherman et al. disclose adding a variety of processing aids (page 9, lines 21-23). Although Sherman et al. do not appear to specifically disclose a transient processing aid, because it is not clear what is exactly a transient processing aid, as there is no clear example of a transient processing aid, it appears that a variety of processing aids can be transient as defined by Applicant. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a transient processing aid in the composition of Sherman et al. because it appears that transient processing aids can be a variety of compounds, such as those in Sherman et al.

Claims 4-6 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman et al. (WO 96/34028) in view of Cifuentes et al. (5,776,614). Sherman et al., as applied above, are as set forth and incorporated herein. Sherman et al. do not

Art Unit: 1712

appear to specifically disclose plasticizers as claimed. Cifuentes et al. disclose a typical silicone PSA composition comprising plasticizers as claimed (col.5, line 7-col.6, line 10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a plasticizer as taught by Cifuentes et al. to the composition of Sherman et al. because Cifuentes et al. teach that adding plasticizers as claimed produces a PSA with high tack and good peel adhesion, resulting in a higher quality product.

Claims 1, 3-7, 10, 13-20, 23-27, 29-36, and 38-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman et al. (WO 96/34028) in view of Sweet et al. (4,882,377). Sherman et al., as applied above, are as set forth and incorporated herein. Sherman et al. do not appear to specifically disclose plasticizers as claimed. Sweet et al. disclose a typical silicone PSA composition comprising plasticizers (viscosity reducing agents) as claimed (col.8, line 43-col.10, line 2) and that adding such plasticizers to increase tack and adhesion properties (col.9, line 60-col.10, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a plasticizer as taught by Sweet et al. to the composition of Sherman et al. because Sweet et al. teach that adding plasticizers as claimed produces a PSA with increased tack and adhesion properties, resulting in a higher quality product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (571) 272-1087. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Keehan
December 15, 2004

Christopher Keehan
Art Unit 1712
Ceeh